



SLM-1000

Signal Level Meter User Manual



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Please refer to the following notes before use.

Please read this user manual carefully to be able to safely use and maintain your meter.

The technical specifications and operation guides in this manual are subject to changes without notice.

Before using the first time, please charge the battery for 3 hours.

Please use the special adapter for charging attached with the meter, do not use it for other product

In case of any technical questions, please contact your local dealer.

1. MAIN FEATURES

- Measures Analog / 8VSB / ATSC3.0 / QAM / Analog
- Extremely fast and accurate with high sensitivity.
- 400*360 color 2.7" LCD display with controllable back light.
- Easily editable channel plans (8)
- Audible notification on signal lock.
- Firmware can be upgraded by USB port.
- Power-supply 100-240V/50/60Hz 12V@1A.
- Ultra-long standby, low power consumption.
- Fast charging Li-ion battery operates for 3 hours of use.

2. BUTTONS & INDICATORS



1. Input
2. Battery Charge Indicator
3. Screen
4. Battery Charging
5. Power On Indicator
6. Function Keys
7. Navigation Keys
8. OK Key = Enter
9. Power Button
10. Menu Button

3. HOW TO USE

Power on the meter, select the signal to measure or from the home screen

In all menus, press [▲/▼] button to navigate, press [◀/▶] button to change parameter, press [OK] button to confirm your select, edit value or enter a list to select a wanted item, press [MENU] button to enter or exit menu.

How to measure QAM signal:

1. Connect the cable to the meter.
2. Choose QAM icon from main menu and press OK.

How to measure 8VSB signal:

1. Connect the cable to the meter.
2. Choose terrestrial icon from main menu and press OK.

How to measure Analog signal:

1. Connect the cable to the meter.
2. Choose Broadcast icon from main menu and press OK.

Please refer below descriptions if you want to learn all functions.

4. MAIN MENU

There are four Options to choose from on the screen

Broadcast TV
8VSB & ATSC 3.0



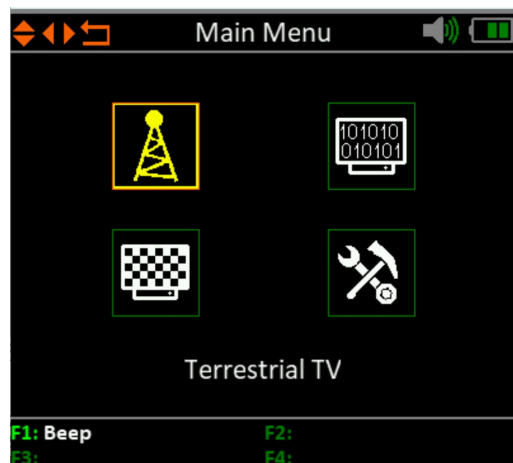
QAM Cable TV



Analog (NTSC)



Settings



(Pressing F1 on this screen will turn on or off the Beep)


5. MEASUREMENT

Once you select a signal type to measure you are able to measure Signal Level, Frequency, MER, BER, Modulation type, and frequency offset.

Pressing one of the Function Keys (F1, F2, F3 or F4) will allow additional operations of the meter




5.1 BROADCAST TV (8VSB or ATSC 3.0)

- : The lock status,. If the meter has locked on the signal the Image is Green, otherwise it is red because it is not locked
- **Plan 1:** Channel Plan. Press [OK] to open a window to select plans.
- **ATSC1.0-6MHz:** Modulation system information.
- **2-057.00MHz:** The channel number and frequency,
Press [OK] to open a window to select options
- **PWR:** The signal level of the channel.
- **MER:** The MER of the channel
- **PreRSB (8VSB):** Bit Error Rate value (Pre Reed-Solomon decoder).
- **PreRSS (8VSB):** Symbol Error Rate value (Pre Reed-Solomon decoder).
- **PreLDPCB (ATSC3.0):** The pre-LDPC BER.
- **PreBCHB (ATSC3.0):** The pre-BCH BER.
- **Freq OFS:** Carrier frequency offset
- **Str:** The power level value of the connected signal in percent.
- **Qty:** The quality value of the connected signal in percent.
- **F1:** Edit the plan name and channel.
- **F2:** Show constellation diagram of the current channel.
- **F3:** Show spectrum diagram of the current channel.
- **F4:** Show multiple channels


5.2 QAM (Cable TV)



- : The lock status, If the meter has locked on the signal the Image is Green, otherwise it is red because it is not locked
- **Plan 1:** Channel Plan. Press [OK] to open a window to select plans
- **J83.B 64QAM...**: Modulation type
- **2-057.00MHz:** The channel number and center frequency
Press [OK] to open a window to select options.
- **PWR:** The signal level of the channel.
- **MER:** The MER of the channel
- **PreRSBER:** BER value (Pre-Reed Solomon decoder).
- **PER:** Packet Error Rate.
- **Freq OFS:** Carrier frequency offset
- **Sym Rate:** The symbol rate
- **Str:** The power level value of the signal in percent.
- **Qty:** The quality value of the channel shown as a percent.
- **F1:** Edit the plan name and channel.
- **F2:** Show constellation diagram of the current channel.
- **F3:** Show spectrum diagram of the current channel.
- **F4:** Show multiple channels

5.3 ANALOG CHANNELS



- : The lock status, If the meter has locked on the signal the Image is Green, otherwise it is red because it is not locked
- **Plan 1:** Channel Plan. Press [OK] to open a window to select plans
- **2-55.250MHz:** The channel Number and frequency, Press [OK] to open a window to select options.
- **PWR:** The signal level of the channel
- **VAR:** Video / Audio Ratio
- **CNR:** The CNR of channel..
- **Freq OFS:** Carrier frequency offset
- **Sym Rate:** The symbol rate
- **STR:** The power level value of the connected signal in percent.
- **QTY:** The quality value of the channel shown as a percent.
- **F1:** Edit the plan name and channel.
- **F2:** Choose the system of ATV.
- **F3:** Show spectrum diagram of the current channel.
- **F4:** Show tilt.

5.4 PLAN EDIT



CH	Frequency	Plan 1
2	057.00MHz	
3	063.00MHz	
4	069.00MHz	
5	079.00MHz	
6	085.00MHz	
7	177.00MHz	
8	183.00MHz	
9	189.00MHz	

F1: Plan Name Edit F2: Swap Plan
F3: Add All F4: Remove All

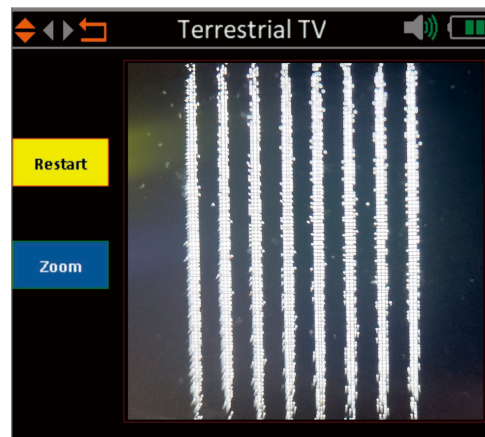
- **OK:** Press OK to add/remove the current channel from plan.
- **F1:** Edit the plan name.
- **F2:** Swap plan, there are 8 plans options.
- **F3:** Add all channels to the current plan.
- **F4:** Remove all Channels from the current plan

5.5 CONSTELLATION

The meter displays constellation of the channel

Press Restart button to refresh constellation

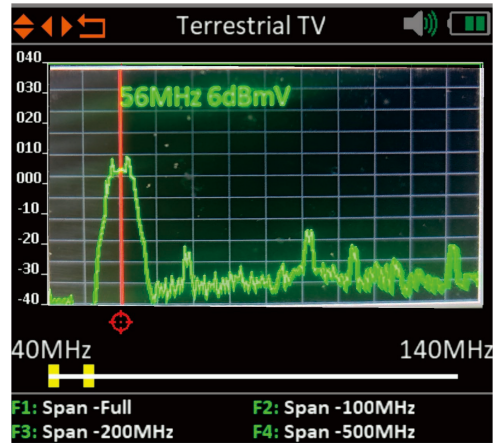
Press Zoom button to zoom in or out constellation



5.6 SPECTRUM

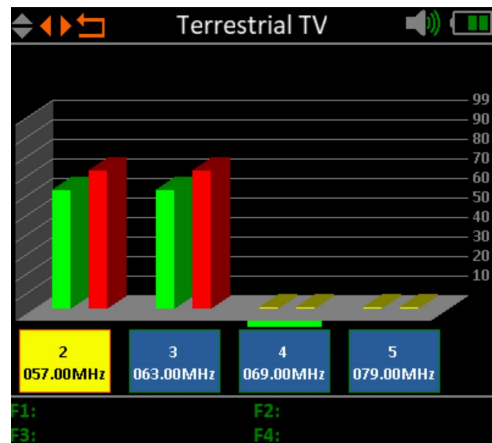
This menu shows the spectrum of the frequency range.

- **F1:** Adjust span to full range.
- **F2:** Adjust span to 100MHz.
- **F3:** Adjust span to 200MHz.
- **F4:** Adjust span to 500MHz.



5.7 MULTI CHANNEL

This display shows the level and quality of 4 channels simultaneously, Use [◀/▶] to select a channel, press OK to add another channel to the list



5.8 TILT

This display shows the level of the first channel and delta value to the first channel simultaneously, Use [◀/▶] to select a channel, press OK to add another channel to the list



6. SYSTEM SETTINGS

System Setting	
Beep	ON
Auto Standby	10MIN
Language	ENG
Unit	dBmV
Factory Reset	OK
Hardware Ver.	1.1
Software Ver.	1.0
F1:	F2:
F3:	F4:

- Beep:** The beep status during pressing keys or when the signal is locking. Press [◀/▶] to turn on or turn off beep.
- Auto Standby:** Set the time for meter to enter standby mode automatically. Press [◀/▶] to switch between Off, 10 min, 20 min, 30 min and 60 min.
- Language:** The language of UI. Press [◀/▶] to switch between available languages .
- Unit:** The unit of power level. Press [◀/▶] to switch between dB μ V and dBmV.
- Factory Reset:** Press [OK] to display a confirm dialog. Then select YES to do a factory reset or select NO to cancel.
- Hardware Ver:** The version number of hardware.
- Software Ver:** The version number of software.

7. SPECIFICATIONS

QAM-B(J83B)	
Bit Error Rate (BER)	CBER (PreRSBER): 1E-7 – 1E-2 PER (Packet Error Rate): 1E-6 – 1E-1
Frequency range	45-1000MHz
Power level	35-100 dB μ V
SNR	20 - 40dB
Symbol Rate	5.6 Msym/s
Constellation	64QAM, 256QAM
Spectrum inversion	auto
8VSB	
Bit Error Rate (BER)	CBER (PreRSBER): 1E-7 – 1E-2 VWER (PostRSWER): 1E-6 – 1E-1
Frequency range	45-1000MHz
Power level	35-100 dB μ V
SNR	5 - 40dB
Constellation	8VSB
Code rate	2/3
Bandwidth	6MHz
ATSC3.0	
Bit Error Rate (BER)	CBER (PreLDPCBER): 1E-7 – 1E-2 LBER (PreBCHBER): 1E-9 – 1E-4

SLM1000

Frequency range	45-1000MHz
Power level	35-100 dB μ V
SNR	5 - 35dB
Constellation	DQPSK, QPSK, 16QAM, 64QAM
FFT	8, 16, 32K
Bandwidth	6 MHz,7 MHz,8MHz
ATV	
Frequency range	42-1005MHz
Video Audio System	NTSC_M PAL_G PAL_M PAL_N PAL_K PAL_L PAL_I SECAM_L ECAM_B SECAM_D
Inputs / Outputs	
RF input	75 Ohms, F (with adaptor)
Interfaces	Mini USB for power input 12V@1A
Display	2.7 Inch, LCD
Battery	Battery Li-ion 1400mAh@7.4V
Charging time	3hour for 80% of capacity
Operating temperature	-5°C to 45°C
Storage temperature	-10°C to 60°C
Dimensions	174 x 82x 35 mm
Weight	0.54kg